Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

Conditional Major draft No. F-03-020
TRIM MASTERS INCORPORATED
1051 WITHROW COURT, BARDSTOWN, KY
December 17, 2003
BRIAN BALLARD, REVIEWER
Plant I.D. # 021-179-00044
Application Log # 55807

SOURCE DESCRIPTION:

The Trim Masters, Inc. (TMI) manufacturing operation in Bardstown, Kentucky produces trimmed automobile door panels. The facility operations include substrate preparation, vacuum forming, edge folding, ornament attachment, accessories, and final assembly. The door panel can be made from either a single pressed wood mat, an injection molded plastic part, or a combination injection molded plastic/wood mat. Substrate presses and injection molding machines are used in the substrate preparation process. Vacuum forming is the process of bonding a vinyl layer to the face of the substrate with adhesive. Edge folding is the process of crimping and adhering the overlapped vinyl, which was applied to the front surface of the door panel in the vacuum forming process. Ornament attachment is the process of attaching a decorative fabric or leather ornament to the door panel. Door and seat accessory parts are produced by injection molding. The final door panel is fully assembled by mechanically attaching the various components produced in upstream processes. The source previously applied for a Title V Permit but on June 9, 2003 applied for a Conditional Major Permit as a result of a change in formulation to low-HAP adhesives used at the facility and an elimination of adhesive usage in some operations. The Conditional Major Permit will cover the addition of the Solara Lower Panel Assembly and PACCAR Edge/Fold Processes. Other new construction covered by the Conditional Major Permit includes; Two (2) Polypropylene Silos, Two (2) 1,550-Ton Injection Molding Machines, One Kenaf Press, and Laser Cutting Process.

COMMENTS:

Potential to emit (PTE) estimates for emission points # 1, #2, #4, #5, #6, #7, #8, #9 and #10 are based on maximum throughput estimates considering process bottlenecks and not on the rated capacity of the applicator in the spray booth(s) at these emission points. Process bottlenecks are attributed to mechanical limitations of the vacuum former machines and injection molding machines that are associated with these emission points. The vacuum former bottleneck is stated as being a 30-second vinyl heating time, and 22 second mechanical load, unload, and material transfer time. Similarly, the injection molding bottleneck is stated as being a 30 second cool-down time and 30 seconds of mechanical load, unload, and material transfer time.

COMMENTS (Continued):

Emission Point #3 is dedicated to Substrate Presses #1 and #2. These substrate presses are wood mat molding operations. Modeling of the formaldehyde emissions from Emission point #3 was conducted using ISCST3. The results of the modeling indicate that ambient air concentrations of formaldehyde based on PTE emission rate for the source will be at levels that pose a risk to human health. A safe emission rate was determined with the use of the ISCST3 model and is included as a limit in the permit. The source has agreed to perform a stack test on this emission point to obtain current data on the formaldehyde emission rate from the substrate press operations. The data will be in the form of pounds of formaldehyde per wood mat and will be used to demonstrate compliance with the formaldehyde emission limitation.

APPLICABLE REGULATIONS:

401 KAR 63:060 - List of hazardous air pollutants, petition process, lesser quantity designations, and source category list.

401 KAR 63:020 - Potentially Hazardous Matter or Toxic Substances, applies to the potentially hazardous matter and toxic substance emissions from affected facilities.

401 KAR 59:010 - Particulate Matter, applies to the particulate matter emissions from affected facilities constructed on or after July 2, 1975.

EMISSION AND OPERATING CAPS DESCRIPTION:

Trim Masters, Inc. has requested voluntary permit limits of less than 90.0 tons per year of volatile organic compounds (VOC), 9.0 tons per year of individual hazardous air pollutants (HAP) and 22.5 tons per year of combined HAPs. A source wide emission limit of 0.17 pounds per hour of formaldehyde will also apply.

PERIODIC RECORDKEEPING:

The permitte shall maintain monthly records of the purchase and usage of the adhesives, hardeners, and cleaning solvents or any other HAP/VOC containing material. HAP/VOC emissions shall be calculated and recorded on a *monthly* basis. These records shall be summarized in tons per month HAP/VOC emissions; subsequently, tons of HAP/VOC emissions per 12-month period shall be recorded. This 12-month period shall be based on a 12-month rolling total representing the most recent year. In addition, these records shall comply with HAP/VOC emission limitations listed herein for the conditional major limitations. These records, as well as purchase orders and invoices for all HAP/VOC containing materials, shall be maintained on site for a period of five years from the date the data was collected and shall be provided to the Division upon request.

The permittee shall maintain daily records of the hours of operation for EP01, Vacuum Formers #2, #3, and #4, EP04, Vacuum Formers #5 and #6 and EP03, Substrate Presses #1 and #2. The permittee shall calculate the formaldehyde emissions in lbs/day and will be allowed to divide that quantity by the hours of operation/day to calculate the lbs/hour formaldehyde emission rate for compliance demonstration with the formaldehyde emission limitation.

OPERATIONAL FLEXIBILITY: NA

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.